

WHAT IS CLAIMED IS:

1. An air intake control device for internal combustion engine comprising a bypass for supplying air to the position downstream from a throttle valve by bypassing the throttle valve, when the throttle valve is set at the mechanically fully closed position, wherein the position for minimum intake air volume to control the air intake is formed at a position slightly more open than the mechanically fully closed position.

2. An air intake control device for internal combustion engine comprising a throttle valve for adjusting the opening area of an air intake passage, wherein a groove for increasing the air passage area is formed on the air intake wall slightly downward from the fully enclosed position of said throttle valve for control purposes.

3. An air intake control device for internal combustion engine according to Claim 2, wherein a groove is formed in an air intake passage so as to increase the volume of air passing through the air intake passage when the throttle valve has opened beyond a predetermined angle.

4. An air intake control device for internal combustion engine according to Claim 3, wherein a

groove is formed in the air intake passage so as to maintain a constant volume of air passing through the air intake passage when the throttle valve has opened beyond a predetermined angle.

5 5. An air intake control device for internal combustion engine according to Claim 2, wherein a part of the air intake passage is formed in a spherical form approximate to the rotary locus of the throttle valve.

10 6. An air intake control device for internal combustion engine according to Claim 3, wherein a part of the air intake passage is formed in a spherical form approximate to the rotary locus of the throttle valve.

15 7. An air intake control device for internal combustion engine according to Claim 4, wherein a part of the air intake passage is formed in a spherical form approximate to the rotary locus of the throttle valve.

20 8. An air intake control device for gasoline engine comprising a bypass for supplying air to the position downstream from a throttle valve, by passing the throttle valve when the throttle valve is set at a default position, wherein the position for minimum
25 intake air volume to control the air intake is formed

at a position slightly more open than said default position.

5 9. An air intake control device for gasoline engine according to Claim 8, wherein a groove is formed on the wall surrounding the air intake passage so as to increase the volume of air passing through the air intake passage when the throttle valve has opened from the position for minimum intake air volume to control the air intake.

10 10. An air intake control device for gasoline engine according to Claim 7, wherein a part of the air intake passage is machined in a spherical form approximate to the rotary locus of the throttle valve.